

## PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 11112P3 WO/RH	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/04433	International filing date (day/month/year) 13.10.2003	Priority date (day/month/year) 12.10.2002
International Patent Classification (IPC) or both national classification and IPC C11D17/00		
Applicant RECKITT BENCKISER INC et al.		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.
3. This report contains indications relating to the following items:
  - I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application

Date of submission of the demand 26.03.2004	Date of completion of this report 22.12.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Miller, B Telephone No. +49 89 2399-8540



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB 03/04433

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-10 as originally filed

**Claims, Numbers**

1-13 filed with telefax on 22.04.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB 03/04433

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	7,13
	No: Claims	1-6,8-12
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Novelty (Article 33(2) PCT)**

The present application does not meet the criterion set forth in Article 33(2) PCT because the subject-matter of claims 1-6,8-12 is not new in respect of the prior art as defined in the regulations (Rule 64(1)-(3) PCT). The following documents disclose already compositions falling within the scope of present claims 1-6,8-12.

- a) **WO-A-96/35771** (D1, examples) describes liquid thickened chlorine bleach compositions comprising Carbopol 695 (polyacrylate thickener), Laponite RD (clay thickener), NaOCl (active chlorine source), dodecyl diphenyloxide disulphonate and/or Hostapur SAS (anionic surfactants) and CaCO<sub>3</sub> (abrasive material).
- b) **US-A-4 695 394** (D2, table VI) depicts liquid thickened chlorine bleach compositions comprising Van GEL ES (clay thickener), NaOCl (active chlorine source), Ammonyx LO (amine oxide), Hostapur (anionic surfactant) and sand (abrasive material).
- c) **EP-A-649 898** (D3, examples) shows liquid thickened chlorine bleach compositions comprising Carbopol 1615 (polyacrylate thickener), KOCl (active chlorine source), lauryl soap (anionic surfactant), Barlox (amine oxide) and CaCO<sub>3</sub> (abrasive material).
- d) **US-A-4 005 027** (D4, example II) exemplifies compositions comprising Barasym (clay thickener), NaOCl (active chlorine source), sodium lauryl alkyl sulfate (anionic surfactant) and sand (abrasive material). The pH of the compositions exemplified is 11.8 or 11.3 or 12.3 (example II, col. 12, lines 20-32).
- e) **WO-A-95/08619** (D5, examples, e.g. page 22, lines 10-15) discloses a liquid thickened chlorine bleach compositions comprising polymer thickener (Carbopol), NaOCl (active chlorine source), sodium laurylate (anionic surfactant) and CaCO<sub>3</sub> (abrasive material) and a hydrotrop.

**2. Inventive Step (Article 33(3) PCT)**

- 2.1. Document D1, which is considered to represent the most relevant state of the art, discloses liquid thickened chlorine bleach compositions.

The subject-matter of present claim 7 differs from said claim by the use of an alternative thickening system (a polyacrylate/polyacrylamide mixture instead of a polyacrylate/clay mixture).

The problem to be solved by the present invention may be regarded as to provide an alternative thickened bleaching composition.

The solution proposed in claim 7 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

It is generally known that polyacrylamide polymers can be used as thickener. Moreover, **DE-A- 100 16 424** (D6, examples 10-12) demonstrates that such thickening polymers are even stable in bleaching compositions.

Since it is within the common practice of the skilled person to replace equivalent thickening agents, the replacement of a commonly used thickening agent such as clay by an alternative thickening agent such as a polyacrylamide does not contribute to an inventive step.

Moreover, the present application is devoid of any unexpected effects or surprising advantages due to the presence of polyacrylamide thickeners. An arbitrary replacement of equivalent thickeners cannot be regarded as inventive.

Therefore, the subject-matter of present claim 7 lacks an inventive step, contrary to Article 33(3) PCT.

2.2. Claim 13 referring back to the examples of the application without indicating any features is not allowable for lack of clarity (Article 6 PCT, Rule 6.2 PCT). The present application is devoid of any unexpected effects or surprising advantages due to the presence of specific ingredients used in the examples. Thus, an arbitrary modification of known compositions cannot be regarded as inventive.

Therefore, the subject-matter of present claim 13 lacks an inventive step, contrary to Article 33(3) PCT.

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## Claims:

1. A liquid thickened chlorine bleach composition comprising:
  - an active chlorine source;
  - 5 at least one surfactant selected from anionic surfactants, amine oxides, and mixtures thereof;
  - 10 at least one thickener selected from polycarboxylates, polyacrylamides, clays, gums, cellulose derivatives, and mixtures thereof;
  - 15 at least one abrasive material selected from oxides, carbonates, quartzes, siliceous chalk, diatomaceous earth, colloidal silicon dioxide, alkali metasilicates, organic abrasive materials selected from polyolefins, polyethylenes, polypropylenes, polyesters, polystyrenes, acetonitrile-butadiene-styrene resins, melamines, polycarbonates, phenolic resins, epoxies and polyurethanes, natural materials selected from rice hulls, corn cobs, and the like, nepheline syenite, or talc and mixtures thereof;
  - water; and
  - 15 optionally, one or more materials selected from perfumes and perfume stabilizers, builders, rheology stabilizers, pH and buffering agents, electrolytes, pigments, colorants and the like.
2. The composition according to claim 1 wherein the surfactant is an amine oxide.
- 20 3. The composition according to any one of claims 1 to 2 wherein the surfactant is a mixture of anionic surfactant and amine oxide.
4. The composition according to any one of claims 1 to 3 wherein the anionic surfactant is selected from alkyl sulfates and alkyl ether sulfates.
- 25 5. The composition according to any one of claims 1 to 4 wherein the anionic surfactant is selected from alkyl ether sulfates.
6. The composition according to any one of claims 1 to 5 wherein the thickener is a mixture of polycarboxylates and clays.
- 30 7. The composition according to any one of claims 1 to 5 wherein the thickener is a mixture of polycarboxylates and polyacrylamides.

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8. The composition according to any one of claims 1 to 5 wherein the thickener is a polycarboxylates.
- 5 9. The composition according to any one of claims 1 to 8 which contains a rheology modifier.
10. The composition according to any one of claims 1 to 9 wherein the pH of the composition is 12 or greater.
- 10 11. The composition according to any one of claims 1 to 10 wherein the active chlorine source is a hypochlorite bleach, and the surfactant does not comprise unsaturations.
12. The composition according to any one of claims 1 to 10 wherein the active chlorine source is a hypochlorite bleach, and the surfactant does not comprise aldehydic, methyl keto or hydroxyl groups susceptible to oxidation by the hypochlorite.
- 15 13. The compositions of the present invention substantially described with reference to the Examples.

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